

Application No.: 10/674,393

Docket No.: 21029-00225-US2

REMARKS

The Office Action and prior art relief upon have been carefully considered. The specification has been reviewed as required by the Examiner and appropriate changes have been made to a number of informalities. These changes correspond to those made in the parent application 09/958,901.

In order to clarify the inventive concept of the present invention, claims 19 and 20 have been canceled and in their stead comprehensive claims 21 and 22 are being submitted for the Examiner's consideration.

Prior claim 19 was rejected under 35 U.S.C. 102(e) as being anticipated by Cruickshank. Claim 20 was rejected under 35 U.S.C. 103(a) as being unpatentable over Cruickshank in view of Storah.

The newly added claims specify certain limitations as set forth on page 7, lines 35-38 that relate to the pipes that are intended to be relined with liners having relatively small diameter in the range of 12.5 – 20 mm.

The problems involved with such pipes with small liners are quite different than those posed by subsea pipe lines dealt with by Cruickshank. The liners in accordance with the present invention have a considerable thinner thickness in the range of 0.25 – 0.55 mm as discussed on page 7, line 36.

According to Storah, the liner produced by the reference is not extruded on site. In this reference, a liner 20 is preheating and then drawn through dies 18 and 19 to effect a reduction in the external diameter of the liner 20. The reduction in diameter of the liner 20 may be in the order of 3% or more (col. 3, lines 55, 56). As disclosed in col. 3, line 62 – col. 4, line 1, air is injected at super atmospheric pressure into the liner (e.g., 2-6 bar) for an extended period of up to 24 hours. This causes the liner 20 to expand into contact with the internal wall of the pipe. Under such circumstances, the reduced diameter liner 61 would certainly have a thickness which is greater than the range of thickness envisioned by the invention and set forth in claim 21. The

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pipe section 40 to be lined would certainly have a diameter that is greater than the water pipe dealt with by the invention and set forth in the claims.

In summary, the problem addressed by the invention deals with the lining of a pipe that has a small diameter as compared to the prior art and this necessitates a liner having a thin thickness that can be pulled through a pipe to be lined without being subjected to pulling forces that would have a tendency to tear the liner.

The invention resolves the problem of lining relatively small diameter pipes while ensuring extrusion on site of a liner that has a cross-sectional profile including many pleats that reduce the difficulties in negotiating the length and curves of the water pipe being lined.

For the reasons set forth above, it is believed that the limitations present in the claim avoid anticipation under 35 U.S.C. 102 and include a combination of recitations that are neither suggested nor taught by either or both of the references combined under 35 U.S.C. 103. Accordingly, the application is believed to be in condition for allowance.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 21029-00225-US2 from which the undersigned is authorized to draw.

Dated: August 18, 2004

Respectfully submitted,

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